

In the claims:

1. (Currently amended) A method of evaluating of a measuring electron microscope, comprising the steps of setting such modes of operation of a microscope, ~~which~~that will be used for subsequent measurements of sizes and line edge roughness; introducing a test-object which has a known straight edge into a chamber of objects of the microscope; orienting the test object on a stage of the microscope ~~so that the edge of the test object is arranged vertically~~; scanning the test object with an ~~electron~~electron beam; obtaining an image of the edge of the test object and saving the image in a digital form; localizing the edge of the test object and saving the image in a digital form; localizing the edge of the test object on the image on each line of scanning; producing storing a set of values of a coordinate $X(i)$ which correspond to a position of the edge of an i -th line of scanning; approximating the sets of values $X(i)$ with a straight line; calculating deviations $\Delta(i)$ of coordinates $X(i)$ from a straight line on each line of scanning; analyzing a set of values of the deviations $\Delta(i)$; calculating an Δ_{ave} and a maximal deviation Δ_{max} and if a maximum value of deviation Δ_{max} exceeds an acceptable tolerance of measurement, making a conclusion ~~that whether or not~~ the microscope can ~~not~~ be used for measurements and ~~needs whether or not~~ an adjustment is needed.

2. (Currently amended) A method as defined in claim 1; and further comprising using as ~~the~~a test object a cleavage surface of ~~an~~an electrically conductive monocrystal ~~composed of an electrically conductive material and having the~~a straight edge.

3. (Currently amended) A method as defined in claim 2, wherein said monocrystal is a crystal of a material selected from the group consisting of silicon, copper and zinc sulfide ZnS , etc.

4. (Currently amended) A method as defined in claim 1; and further comprising using as the test object a relief ledge, which is formed in a surface layer of a monocrystal by methods of selective chemical etching and ~~having~~has atom-smooth surfaces and straight edges.

5. (Original) A method as defined in claim 1, wherein said approximating with a straight line includes using a method of least squares.

6. (Currently amended) A method as defined in claim 1; and further comprising the steps of suppressing video signal noises before localization of ~~localizing~~ the edges of the test object ~~on each line, suppressing noises of a video signal.~~